

REMARKS

Responsive to the Office Action mailed March 31, 2003, the Examiner's comments and cited art have been studied.

Amendments

Applicants have amended claim 1 to recite means for ensuring that the contact holder is displaced after the third contact is interconnected and means for ensuring that the third contact is separated before the first and second contacts on disengagement. Because Applicants' previous response raised the question of whether the Bac reference provides such means for ensuring, the amendments should not require a new search.

Applicants have further amended claim 1 to replace the phrase "the or each" with "the." The amendment does not change the scope of the claim.

Claim Rejections Under 35 U.S.C. § 102

Claims 1 and 5 are rejected under 35 U.S.C. § 102(b) as being anticipated by Bac, U.S. Patent No. 3,360,764. Applicants respectfully traverse the rejections.

Applicants agree with the Office Action's assessment in so far as Bac discloses a connector comprising two interchangeable connector elements, (A, B), at least one of which (A) supports a first contact (13) and a displaceable contact holder (15.21) carrying second (25) and third (26) contacts. However, the Office Action goes on to assert that the remaining features of claim 1 are also known from Bac. Applicants respectfully dispute this assertion.

In the Bac reference, during connection, there is nothing to prevent the first and second contacts becoming interconnected before the third contact is connected to a contact of another connector. Furthermore, during disconnection there is nothing to prevent the third contact disconnecting from a contact of another connector prior to the first contact being disconnected from the second contact. Even if the connector of Bac *may* be connected and disconnected in the claimed order, Bac fails to recite a means for ensuring such an ordering of connection and disconnection.

In particular, there is no mechanism to ensure that the block 21 of Bac is disengaged from the block 11 until the engagement with the block 31. The block 21 can be pushed into the block 11, engaging the pins 26 with the female sockets 13, independently of the interconnection with the connector B. If, for example, the block 31 is rotated so that the slot 37 does not engage the stud 38, the block 31 may urge the block 21 into contact with the block 11, after which the block 31 can be rotated into place for connection with block 21. Likewise, although the spring 18 will generally urge the block 21 away from the block 11, if the spring 18 fails to exert sufficient force against the block 21 to do so for any reason, the block 31 can be disconnected from the block 21 while the block 21 remain connected to the block 11. No mechanism exists in Bac to prevent this undesirable and unsafe connection or disconnection.

In contrast, Applicant's claimed subject matter expressly ensures this sequence of events. Specifically, the first and second contacts cannot mate until the third contact 34 has mated with a contact 15 provided by another connector. This is because the third contact 34 must

mate with a contact 15 provided by another connector such that the other connector forces the slider 20 back against spring 21, and thereby releases the lock ball 31, to allow the sliding contact holder 30 to move, and thereby to allow the first contact 36 and the second contact 35 to meet. Bac fails to disclose such an apparatus.

Similarly, during the disconnection of the two connectors, the third contact 34 cannot initially be removed from the contact 15 of the other connector, because the lock balls 33 prevent separation of the sliding contact holders 4 from the female connector body 2. A third contact 34 can only be removed from the contact 15 of the other connector after the first contact 36 and the second contact 35 have been pulled apart, thereby allowing the lock balls 33 to move radially outwards, and thereby allowing the connectors to be separated. Again, Bac fails to disclose such an apparatus.

Thus, in accordance with claim 1, the connectors "comprise means for ensuring that on interengagement the contact holder is displaced from the first position to the second position after the third contact is interconnected," "comprise means for ensuring that on disengagement the contact holder is displaced from the second to the third position," and also "comprise means for ensuring that on disengagement the first and the second contacts separate before the third contact. . . ." As shown above, Bac fails to disclose a connector that ensures this sequence of events. For these reasons, Applicants respectfully request reconsideration and withdrawal of the rejections.

Claim Rejections Under 35 U.S.C. § 103

Claims 2-4, 6-8, 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bac, U.S. Patent No. 3,360,764. Applicants respectfully traverse the rejections.

Claim 2-4, 6-8, 11, and 12 depend from allowable claim 1 and are therefore also allowable. For this reason, Applicants respectfully request withdrawal of the rejections.

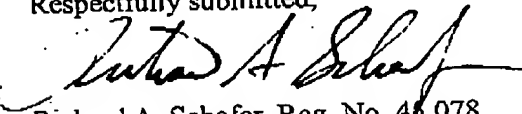
CONCLUSION

The prior art made of record, but not specifically cited, is not believed to disclose any significant information that is not sufficiently discussed in this Amendment.

It is respectfully submitted that all issues and rejections have been adequately addressed and that all claims as amended and pending following entry of this Amendment are now allowable and that the case should be advanced to issuance.

If the Examiner has any questions or wishes to discuss the claims as amended, the Examiner is encouraged to call the undersigned at the telephone number indicated below.

Respectfully submitted,


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